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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/857,481	06/04/2001	Stefan Schaffler	P01,0147	4787

7590 04/02/2003
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EXAMINER

SUN, XIUQIN

ART UNIT PAPER NUMBER

2863

DATE MAILED: 04/02/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/857,481	SCHAFFLER ET AL.	
	Examiner	Art Unit	
	Xiuqin Sun	2863	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 February 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 11-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 12, 13, 18 and 19 is/are allowed.
- 6) ☒ Claim(s) 11, 14-17 and 20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 June 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 11, 14-17 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Guiver et al. (U.S. Pat. No. 5,809,490) in view of Marko et al. (U.S. Pat. No. 5,361,628).

Guiver et al. teach a method and system for reducing a number of measured values for modeling a technical process of an engineering plant (see abstract; col. 1, lines 12-40; col. 2, lines 44-50 and Fig. 2), comprising the steps and means of: a) measuring an initial set of empirical values at various steps of a technical process using sensors while said technical process is operating based on a predetermined set of parameters (col. 3, lines 38-65 and col. 4, lines 13-26); b) screening out a set of empirical values from the initial set of empirical values for reducing a size of the initial set of empirical values to obtain a screened set of empirical values (see Figs. 2-6) by: dividing the initial set of empirical values into classes based on a predefined criteria followed by assessing each empirical value in

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each class with respect to a predefined first threshold value, and if a result of said assessing step lies below said predefined first threshold value, then screening out said empirical value (Figs. 3 and 5; col. 2, lines 30-39; col. 5, lines 1-22; col. 7, lines 27-67; col. 8, lines 1-22; col. 9, lines 54-63; col. 10, lines 30-32, lines 43-46 and lines 55-60); and c) modeling said technical process using said screened set of empirical values (col. 2, lines 44-50; col. 5, lines 43-50; col. 11, lines 41-49 and col. 12, lines 44-63). The teachings of Guiver et al. further include the steps of: reducing a number of empirical values in a class by selecting a representative empirical value for the class (col. 2, lines 34-40 and col. 5, lines 3-12), wherein the representative empirical value is an average of the empirical values in the class (col. 5, lines 3-7), one of a maximum value and a minimum value of the empirical values in the class (col. 5, lines 3-7), and a median of the empirical values in the class (col. 5, lines 3-7).

The teaching of Guiver et al. do not mention explicitly the steps of: assessing each class with respect to a predefined second threshold value, if a result of said assessing step lies below the second predefined threshold value, then, screening out said class.

Marko et al. disclose a technique of cluster-based classifier, and teach the step and means of assessing each class with respect to a predefined second threshold value, if a result of said assessing step lies below the second predefined threshold value, then, screening out said class (col. 11, lines 53-68 and col. 12, lines 1-61).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to include the teaching of Marko cluster-based classifier in the

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Guiver system in order to use a predefined threshold for assessing each class of empirical values and screening out classes with respect to the previous assessment (Marko et al., col. 2, lines 12-33).

Allowable Subject Matter

3. Claims 12-13 and 18-19 are allowed.

Reasons for Allowance

4. The following is an examiner's statement of reasons for allowance:

The primary reason for the allowance of independent claim 12 is the claimed predefined criteria that is based on said predetermined first set of parameters. It is this limitation found in the claim, as it is claimed in the combination, that has not been found, taught or suggested by the prior art of record which makes this claim allowable over the prior art.

The primary reason for the allowance of independent claim 13 is the claimed method step of determining an empirical value associated with a transient phase of the technical process resulting from a modification of the predetermined set of parameters; and screening out the empirical value associated with the transient phase. It is this limitation found in the claim, as it is claimed in the combination, that has not been found, taught or suggested by the prior art of record which makes this claim allowable over the prior art.

The primary reason for the allowance of independent claim 18 is the claimed method step of screening out a class with fewer number of empirical values than a predefined number. It is this limitation found in the claim, as it is claimed in the combination, that has not been found, taught or suggested by the prior art of record which makes this claim allowable over the prior art.

The primary reason for the allowance of independent claim 19 is the inclusion of the limitation which says: the result of said assessing step is a difference of the empirical value in the class with the predefined first threshold value. It is this limitation found in the claim, as it is claimed in the combination, that has not been found, taught or suggested by the prior art of record which makes this claim allowable over the prior art.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Response to Arguments

5. Applicant's arguments with respect to claims 11, 14-17 and 20 have been considered but are moot in view of the new ground(s) of rejection.

Claims 11, 14-17 and 20 are rejected as new art (U.S. Pat. No. 5,361,628) has been found to teach the steps and means of assessing each class with respect to a predefined second threshold value, if a result of said assessing step lies below the second predefined threshold value, then, screening out said class. For detailed

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response, please refer to section 2 set forth above in this Office Action.

Contact Information

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Xiuqin Sun whose telephone number is (703)305-3467. The examiner can normally be reached on 7:00am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Barlow can be reached on (703)308-3126. The fax phone numbers for the organization where this application or proceeding is assigned are (703)872-9318 for regular communications and (703)872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0956.

XS
March 26, 2003


John Barlow
Supervisory Patent Examiner
Technology Center 2800